

IN THE CLAIMS:

In response to the further election/restriction requirement, applicants hereby elect to prosecute species A directed to TiO_2 anatase with respect to the metal oxide catalyst and species M directed to MnO_2 concerning the second catalyst. Consequently, please cancel claim 23 and amend claims 20 and 22, without prejudice.

-
1. (Withdrawn).
 2. (Withdrawn).
 3. (Withdrawn).
 4. (Withdrawn).
 5. (Withdrawn).
 6. (Withdrawn).
 7. (Withdrawn).
 8. (Withdrawn).
 9. (Withdrawn).
 10. (Withdrawn).
 11. (Withdrawn).
 12. (Withdrawn).

B1

13. (Withdrawn).

14. (Withdrawn).

15. (Withdrawn).

16. (Withdrawn).

17. (Withdrawn).

B1

18. (Original) A photolytic cell comprising:
a transparent window;
an anode conductor layer adjacent to said transparent window;
a light-activated catalyst disposed upon said anode conductor layer;
a cathode connected to said anode; and NA
a cathode bordering said cathode.

19. (Original) The photolytic cell of claim 18, wherein said light-activated catalyst is a metal oxide catalyst.

20. (Currently Amended) The photolytic cell of claim 18, wherein said metal oxide catalyst is selected from the group consisting of TiO_2 anatase, WO_3 , and ZnO . NA.

21. (Original) The photolytic cell of claim 18, wherein said cell further comprises a second catalyst disposed on said light-activated catalyst.

22. (Currently Amended) The photolytic cell of claim 21, wherein said second catalyst includes at least one of Fe^{II} , Fe^{III} , Cu^{I} , Cu^{II} , Co^{II} , Co^{III} , Mn^{II} , Mn^{III} , Mn^{IV} , and MnO_2 .

23. (Cancelled).

24. (Original) The photolytic catalyst of claim 18, wherein said photolytic cell further comprises a cation exchange membrane abutting said catholyte. NA

25. (Original) The photolytic cell of claim 18, wherein said photolytic cell converts water into oxygen.

26. (Original) The photolytic cell of claim 18, wherein said light-activated catalyst converts water into active oxygen.

B1 27. (Original) The photolytic cell of claim 21, wherein said second catalyst converts active oxygen to dissolved oxygen.

28. (Original) The photolytic cell of claim 18, wherein electrons flow from said anode to said cathode.

29. (Withdrawn).

30. (Withdrawn).

31. (Withdrawn).

32. (Withdrawn).

33. (Withdrawn).

34. (Withdrawn).